

IN THE CLAIMS:

1. (Currently amended) A medical device for supporting a structure comprising:
a screw assembly, the screw assembly including
 a base,
 an arm, and
 an interconnection means for coupling the base to the arm, the interconnection means including a cross member extending from the arm through the base allowing the arm to be positionable in a first position that is parallel to a long axis of the base and positionable in a second position that is perpendicular to the long axis of the base,
 where the base is configured for attachment to a first structure in a patient and the arm is configured for attachment to a support structure; and
the support structure, comprising:
 a support element configured to support a second structure in the patient,
 at least one receiver included in the support element and configured to receive the arm of the screw assembly, and
 a locking mechanism configured to lock the arm to the support element.

2. (Previously presented) The medical device of claim 1, wherein the first structure in the patient is bone.

Claim 3 (Cancelled)

4. (Previously presented) The medical device of claim 1, further comprising a second screw and wherein the first and second screw assemblies are attached to the support structure, the support structure including two receivers.

Response to Non-Final Office Action
Application Serial No. 10/825,962
Atty Docket No. MSDI-951/P32399.00
Page 2 of 10

5. (Original) The medical device of claim 1, wherein the screw assembly is comprised of a material selected from the group consisting of titanium, stainless steel, carbon fiber, shape memory metal, a biocompatible material, a reabsorbable material, and combinations and composites thereof.

6. (Original) The medical device of claim 1, wherein the screw assembly is comprised of titanium.

7. (Original) The medical device of claim 1, wherein the screw assembly is comprised of a continuous piece of shape memory metal.

8. (Original) The medical device of claim 1, wherein the interconnection means is comprised of shape memory metal.

9. (Original) The medical device of claim 1, wherein the screw assembly is comprised of a continuous piece of material suited for bending; and wherein the interconnection means for coupling the base to the arm is positioned by bending.

10. (Original) The medical device of claim 1, wherein the screw assembly has an overall length in the range substantially between 0.1 and 100 centimeters.

11. (Original) The medical device of claim 1, wherein the screw assembly has an overall length in the range substantially between 50 and 600 millimeters.

12. (Original) The medical device of claim 1, wherein the screw assembly has an overall length sized for subcutaneous support of the posterior of a spine.

Response to Non-Final Office Action
Application Serial No. 10/825,962
Atty Docket No. MSDI-951/P32399.00
Page 3 of 10

13. (Previously presented) The medical device of claim 1, wherein the arm is comprised of a body having a distal end and a proximal end, a base yoke positioned at the proximal end and a connector positioned at the distal end.

14. (Original) The medical device of claim 13, wherein the body of the arm is rod shaped.

15. (Previously presented) The medical device of claim 1, wherein the base is comprised of a base head coupled to the arm and an anchor.

16. (Original) The medical device of claim 15, wherein the anchor is selected from the group consisting of a screw, staple, hook and a nail.

17. (Original) The medical device of claim 16, wherein the anchor is a screw configured for bone anchoring.

18. (Original) The medical device of claim 17, wherein the anchor is a screw configured for insertion into the pedicle of a vertebrae.

19. (Original) The medical device of claim 1, wherein the interconnection means includes a press-fit cross pin.

20. (Original) The medical device of claim 1, wherein the interconnection means is comprised of an open saddle head and coupling-cross piece.

21. (Currently amended) The medical device of either claim 19 or 20, wherein the interconnection means is comprised of a setscrew;

wherein the setscrew maintains the arm and the base together as a single unit; and

wherein the setscrew can be tightened within the interconnection means to effect locking of the arm in a position that is substantially perpendicular to the long axis of the base.

Response to Non-Final Office Action
Application Serial No. 10/825,962
Atty Docket No. MSDI-951/P32399.00
Page 4 of 10

22. (Currently amended) The medical device of claim 19-~~or~~20, wherein the interconnection means is comprised of a cam;

wherein the cam maintains the arm and the base together as a single unit; and

wherein the cam can be turned within the interconnection means to effect locking of the arm in a position that is substantially perpendicular to the long axis of the base.

23. (Previously presented) The medical device of claim 1, further the support structure further comprising:

an anchor connected to the support element,

wherein the anchor is configured for attachment to the second structure in the patient.

24. (Previously presented) A medical device support structure comprising:

two receivers;

wherein each receiver includes

an open-ended receiver configured for attachment to a medical device and

a locking means, the support structure configured to receive the medical devices and lock the medical devices to the support structure using the locking means, after the support structure has been installed in a patient; and

a hinged claw having a threaded hinge-engagement member and nut disposed on a top surface of the medical device support structure.

25. (Original) The medical device support structure of claim 24, wherein the open-ended receiver is configured as a saddle-type receiver.

26. (Original) The medical device support structure of claim 24, wherein the locking means is selected from the group consisting of a setscrew and a cam.

Response to Non-Final Office Action
Application Serial No. 10/825,962
Atty Docket No. MSDI-951/P32399.00
Page 5 of 10

27. (Original) The medical device support structure of claim 24, wherein the locking means are oriented within a plane of a top surface of the medical device support structure for access from the top surface.

28. (Original) The medical device support structure of claim 24, wherein the support structure is comprised of a material selected from the group consisting of titanium, stainless steel, carbon fiber, a biocompatible material, a reabsorbable material and combinations and composites thereof.

29. (Original) The medical device support structure of claim 24, wherein the medical device support structure is comprised of titanium.

30. (Previously presented) The medical device support structure of claim 24, wherein the hinged claw is a central hinged claw and tightening the nut onto the threaded hinge-engagement member causes a pivoting about the hinge to effect closing of the claw.

31. (Previously presented) The medical device support structure of claim 24, further comprising:
two screw assemblies;
wherein each screw assembly includes
a base,
an arm, and
an interconnection means for coupling the base to the arm, the interconnection means allowing the arm to be positionable in a first position that is parallel to a long axis of the base and positionable in a second position that is perpendicular to the long axis of the base, the base configured for attachment to a first structure in a patient and the arm configured for attachment to the support structure.

32. (Previously presented) The medical device support structure of claim 31, wherein the first structure in a patient is bone.

Response to Non-Final Office Action
Application Serial No. 10/825,962
Atty Docket No. MSDI-951/P32399.00
Page 6 of 10

- 33. (Previously presented) The medical device support structure of claim 31, wherein the support structure further comprises:
 - an anchor and
 - a locking means for the anchor;wherein the anchor is configured for attachment to a structure in a patient.
- 34. (Previously presented) The medical device support structure of claim 33 wherein the second structure in a patient is bone.
- 35. (Original) The medical device support structure of claim 33 wherein the locking means is selected from the group consisting of a setscrew and a cam.
- 36. (Original) The medical device support structure of claim 33 wherein the anchor is selected from the group consisting of a screw, staple, hook and a nail.

Claims 37-44 (Cancelled)

45. (New) A medical device for supporting a structure comprising:

a screw assembly, the screw assembly including

- a base,
- an arm, and
- an interconnection means for coupling the base to the arm, the interconnection means allowing the arm to be positionable in a first position that is parallel to a long axis of the base and positionable in a second position that is perpendicular to the long axis of the base, wherein the interconnection means is comprised of an open saddle head, coupling-cross piece, and a setscrew, wherein the setscrew maintains the arm and the base together as a single unit, and wherein the setscrew can be tightened within the

Response to Non-Final Office Action
Application Serial No. 10/825,962
Atty Docket No. MSDI-951/P32399.00
Page 7 of 10

interconnection means to effect locking of the arm in a position that is substantially perpendicular to the long axis of the base,

where the base is configured for attachment to a first structure in a patient and the arm configured for attachment to a support structure; and the support structure, comprising:

a support element configured to support a second structure in the patient,

at least one receiver included in the support element and configured to receive the arm of the screw assembly, and

a locking mechanism configured to lock the arm to the support element.

46. (New) A medical device for supporting a structure comprising:

a screw assembly, the screw assembly including

a base,

an arm, and

an interconnection means for coupling the base to the arm, the interconnection means allowing the arm to be positionable in a first position that is parallel to a long axis of the base and positionable in a second position that is perpendicular to the long axis of the base, wherein the interconnection means is comprised of an open saddle head, a coupling-cross piece, and a cam, wherein the cam maintains the arm and the base together as a single unit, and wherein the cam can be turned within the interconnection means to effect locking of the arm in a position that is substantially perpendicular to the long axis of the base

where the base is configured for attachment to a first structure in a patient and the arm configured for attachment to a support structure; and the support structure, comprising:

a support element configured to support a second structure in the patient,

at least one receiver included in the support element and configured to receive the arm of the screw assembly, and

a locking mechanism configured to lock the arm to the support element.

Response to Non-Final Office Action
Application Serial No. 10/825,962
Atty Docket No. MSDI-951/P32399.00
Page 8 of 10